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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/528,524	03/20/2000	Jacques Michelet	B-3881-617765-1	5142

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EXAMINER

PHAM, THOMAS K

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 01/23/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/528,524

Applicant(s)

MICHELET ET AL.

Examiner

Thomas K Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

***Response to Amendment***

1. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.
2. New claims 21-32 have been entered.
3. Applicants are reminded that the Examiner of record has been changed. Therefore, any though processes and how the previous Examiner applied the prior arts in prior rejections has little to do with the office action thereof.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

4. Claims 1, 6, 15, 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humphries et al. U.S. Patent No. 5,621,662 (hereinafter Humphries) in view of Lee U.S. Patent No. 5,631,698.

**Regarding claim 1**

Humphries teaches a communication process between an Information Handling System (IHS) and a watch dog circuit having dialing capability (col. 8 lines 48-54, "the system includes ... system is not active"); wherein the IHS system includes a processor under control of an operating system, a graphics system (fig. 3, element 20, host computer 20 should include a processor under control of an operating system and a video graphic display) and an electronic circuit operating independently of processor and the graphics system (col. 8 lines 57-60, "the watch dog circuit ... the serial connector"), at least one display receives a graphics channel comprising the graphic signals generated by graphics system (fig. 3, element 20, this is part of

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the graphic display of the host computer 20) but does not teach at least one display having On Screen Display (OSD) capability; the process being characterized in that said service channel is also used to permit said independent electronic circuit to have access to the On Screen Display (OSD) capability of said at least one display in order to display text and/or graphics independently of said processor and said operating system and a service channel allowing interaction between at least one display and operating system. However, Lee teaches an On Screen Display (OSD) capability allowing interaction between normal display and diagnostic display (col. 2 lines 55-59, "The OSD unit ... displayed on the screen") for displaying abnormal state of the system (col. 2 lines 51-55, "The OSD unit 240 is ... on a screen"). It is obvious to one of ordinary skill in the art at the time the invention was made to incorporate the OSD of Lee with the independent watch dog circuit of Humphries in addition to the dialing capability because it would provide for a visual notification of hardware failure to the user both on the OSD and remotely alert for service via dialing method.

**Regarding claims 6 and 15**

Humphries teaches an information Handling System (IHS) comprising: a processor arranged to operate under the control of an operating system, a graphics system (fig. 3, element 20, host computer 20 should include a processor under control of an operating system and a video graphic display) and an electronic circuit operable independently of said processor (col. 8 lines 57-60, "the watch dog circuit ... the serial connector") but does not teach at least one display having On Screen Display (OSD) capability and including first receiving means for receiving a graphics channel upon which graphics signals generated by said graphics system are transmitted, and second receiving means for receiving a service channel for allowing interaction between said at

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least one display and said operating system; characterized in that said service channel and said display are arranged to permit said independent electronic circuit to access the On Screen Display (OSD) capability of said at least one display in order to display text and/or graphics independently of said processor and said operating system. However, Lee teaches an On Screen Display (OSD) capability allowing interaction between normal display and diagnostic display (col. 2 lines 55-59, "The OSD unit ... displayed on the screen") for displaying abnormal state of the system (col. 2 lines 51-55, "The OSD unit 240 is ... on a screen"). It is obvious to one of ordinary skill in the art at the time the invention was made to incorporate the OSD of Lee with the independent watch dog circuit of Humphries in addition to the dialing capability because it would provide for a visual notification of hardware failure to the user both on the OSD and remotely alert for service via dialing method.

**Regarding claims 21 and 26**

Humphries teaches communication process between an Information Handling System (IHS) and a watch dog circuit having dialing capability (col. 8 lines 48-54, "the system includes ... system is not active"); wherein said IHS system includes a processor under control of an operating system, a graphics system (fig. 3, element 20, host computer 20 should include a processor under control of an operating system and a video graphic display) and an electronic circuit which is arranged so as to be able to function before the operating system has booted (col. 8 lines 57-60, "the watch dog circuit ... the serial connector"), the at least one display receives a graphics channel comprising the graphics signals generated by said graphics system (fig. 3, element 20, this is part of the graphic display of the host computer 20) but does not teach at least one display having On Screen Display (OSD) capability; the process being characterized in that said service

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channel is also used to permit the independent electronic circuit to have access to the On Screen Display (OSD) capability of at least one display in order to display text and/or graphics before the operating system has booted and a service channel allowing interaction between said at least one display and the operating system. However, Lee teaches an On Screen Display (OSD) capability allowing interaction between normal display and diagnostic display (col. 2 lines 55-59, "The OSD unit ... displayed on the screen") for displaying abnormal state of the system (col. 2 lines 51-55, "The OSD unit 240 is ... on a screen"). It is obvious to one of ordinary skill in the art at the time the invention was made to incorporate the OSD of Lee with the independent watch dog circuit of Humphries in addition to the dialing capability before the operating system has booted because it would provide for a visual notification of hardware failure to the user both the OSD and remotely alert for service via dialing method.

5. Claims 2-3, 5, 7-9, 16, 22, 25 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humphries in view of Lee and further in view of "VESA Display Data Channel Command Interface (DDC/CI) Standard" (hereinafter VESA).

**Regarding claims 2, 16 and 22**

Humphries and Lee teach the communication process having the OSD capabilities but do not teach the display consists of a bi-directional serial communication link which is compatible with the IC protocol, providing either DDC or DDC/CI communication support with said operating system, as well as an I<sup>2</sup>C communication link between said independent electronic circuit and said at least one display in order to provide to said electronic circuit and a direct access to the OSD capability of said at least one display. However, VESA teaches the use of DDC/CI offers

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bi-directional communication between the computer graphic host and the display device (see page 1, Summary) using I<sup>2</sup>C communication. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the bi-directional communication DDC/CI of VESA into the independent electronic circuit and OSD of Humphries and Lee in order to maximize reliability and system uptime by providing information in a compact and scalable format to allow the graphic sub-system to be configured based on the capabilities of the attached display.

**Regarding claims 3, 9, 23 and 29**

Humphries teaches an electronic circuit consists of a hardware monitoring circuit via service channel (col. 8 lines 55-67, "FIG. 8 is a schematic ... automatic dialing signal"). Lee teaches an OSD for displaying monitoring feedback information to the user (col. 2 lines 51-55, "The OSD unit 240 is ... on a screen").

**Regarding claims 5 and 25**

Humphries teaches the hardware monitoring circuit is connected via a network to said IHS system in order to provide an alarm on Local Area Network (LAN) capability (fig. 3, display the home automation system configured as part of a LAN).

**Regarding claims 7 and 27**

VESA teaches service channel consists of a bi-directional serial communication link interacting between the display and its graphic host (see page 9, Summary).

**Regarding claims 8 and 28**

Humphries and Lee teach the information handling system with OSD capability and independent electronic circuit. The serial communication link is compatible with the I<sup>2</sup>C protocol, and

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provides a DDC or a DDC/CI communication interface with said processor as well as an I<sup>2</sup>C communication link, which VESA discloses DDC/CI display control interface level (see page 11).

6. Claims 4 and 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Humphries in view of Lee and in further view of VESA and in further view of Nelson U.S. Patent No. 5,768,612.

**Regarding claims 4 and 24**

Humphries, Lee and VESA teach the information handling system with independent monitoring circuit having OSD capability and the I<sup>2</sup>C communication link but do not teach graphics system is either an AGP or PCI graphics card which is plugged into a corresponding AGP or PCI slot having at least two conductors being reserved for said I<sup>2</sup>C communication link conveying the OSD commands to be directed to said at least one display. However, Nelson teaches a graphic accelerator is a PCI graphics card which is plugged into a corresponding PCI slot having at least two conductors (col. 4 lines 14-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the PCI buses of Nelson with the I<sup>2</sup>C communication link of VESA and the information handling system with independent monitoring circuit having OSD capability of Humphries and Lee in order to utilized the high bandwidth and flexibility that is independent of new processor technologies and increases processor speed.

7. Claim 10, 13-14, 17-20 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humphries in view of Lee and further in view of VESA and in further view of Fisch et al. U.S. Patent No. 5,901,297 (hereinafter Fisch).



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**Regarding claims 10, 13, 17-20 and 30**

Humphries, Lee and VESA teach the information handling system with independent monitoring circuit having OSD capability and the I<sup>2</sup>C communication link but do not teach an arbitration means having a first input connected to receive the first I<sup>2</sup>C communication channel provided by the graphics engine, and having a second input for receiving a second I<sup>2</sup>C communication channel provided by the hardware monitoring circuit; the arbitration means providing arbitration between the first and the second I<sup>2</sup>C communication links so that the hardware monitoring circuit and the processor can both get access to the second receiving means of at least one display. However, Fisch teaches the use of an initialization mechanism for symmetric arbitration agents (see arbitration unit 320 in Fig. 3). The arbitration counter of each bus agent is used to keep track of which agent was the last or current owner of the bus and which agent will be the next owner of the bus (col. 2, lines 35-40). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the arbitration means of Fisch into the computer system of Humphries, Lee and VESA in order to improve the efficiency of the hardware monitoring systems by systematically assigning a priority level to each of the multiple agents on a bus.

**Regarding claim 14**

Lee teaches a graphics system characterized in that said arbitration means are arranged to prevent the access of said service channel to one among said first and second I<sup>2</sup>C communication links until a preceding I<sup>2</sup>C transaction has been successfully completed. This process is interpreted as an operable connection is achieved and memory status: obtained by system component such as a

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device arbiter, tracking past memory access activities and inferring the status of one or more memory devices from that past activity.

8. Claim 11-12 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humphries in view of Lee and further in view of VESA in further view of Fisch and in further view of Nelson U.S. Patent No. 5,768,612.

**Regarding claims 11 and 31**

Humphries, Lee, VESA and Fisch teach the information handling system with independent monitoring circuit having OSD capability and the I<sup>2</sup>C communication link but do not teach graphics system is either an AGP or PCI graphics card which is plugged into a corresponding AGP or PCI slot having at least two conductors being reserved for said I<sup>2</sup>C communication link conveying the OSD commands to be directed to said at least one display. However, Nelson teaches a graphic accelerator is a PCI graphics card which is plugged into a corresponding PCI slot having at least two conductors (col. 4 lines 14-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the PCI buses of Nelson with the I<sup>2</sup>C communication link of VESA and the information handling system with independent monitoring circuit having OSD capability of Humphries, Lee, and Fisch in order to utilized the high bandwidth and flexibility that is independent of new processor technologies and increases processor speed.

**Regarding claims 12 and 32**

Nelson teaches the graphics accelerator and CPU are on the same motherboard (see figure 1).

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (703) 305-7587 and fax number is (703) 746-8874, Monday-Thursday and every other Friday from 7:30AM- 5:00PM EST or contact Supervisor *Mr. Anil Khatri* at (703) 305-0282.

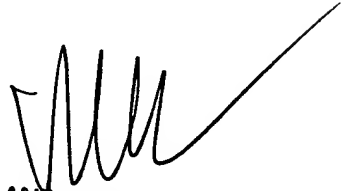
Any response to this office action should be mailed to: **Director of Patents and Trademarks Washington, D.C. 20231**, or **Hand-delivered** responses should be brought to **Crystal Park II, 2121 Crystal Drive Arlington, Virginia, (Receptionist located on the 4th floor)**, or fax to the **official fax number (703) 872- 9306**.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

**Thomas Pham**  
*Patent Examiner*

TP

January 20, 2004

  
**ANIL KHATRI**  
**SUPERVISORY PATENT EXAMINER**